What is claimed is:

1.   A general financial risk management apparatus for managing risks in compound transactions having one or more transaction entities relating to finance, comprising:

one or more transaction entity modeling means comprising:

storage means for individually storing information about the transaction entities, and

a current price evaluating operation means for the transaction entities; and

virtual transaction means comprising:

reference information storage means for storing a reference information group for reference to each of said transaction entity modeling means, and

compound transaction characteristic computation means for sequentially referring to each of said transaction entity modeling means in said reference information group, obtaining operation results by performing said current price evaluation operation means, and computing a characteristic of the compound transactions based on each of the operation results.

2.   The apparatus according to claim 1, wherein

said compound transaction characteristic computation means comprises factor multiplication means for multiplying each of said operation results by a predetermined conversion factor.

3.   The apparatus according to claim 1, wherein

said transaction entity modeling means is implemented as a list structure.

70

1   4.   The apparatus according to claim 1, wherein:

2   said transaction entity modeling means is a module for storing as a class member a

3   parameter for use by said storage means modeling the transaction entities, storing the current price

4   evaluation operation means as a method, and operating an instance of a predetermined class in an

5   object-oriented concept; and

6   said virtual transaction means is a module for holding said reference information group as

7   a list member in said reference information storage means, holding said compound transaction

8   characteristic computation means as a virtual method, and operating an instance of a predetermined

9   container class in the object-oriented concept.

5.   The apparatus or a financial transactions modeling apparatus according to claim 1, further

comprising:

financial characteristic computation means for computing financial characteristics in each

current price evaluating operation performed by said current price evaluation operation means, and

5   providing each current price evaluation operation means with the financial characteristics.

1   6.   The apparatus according to claim 5, wherein:

2   said financial characteristic computation means is a module for modeling the financial

3   characteristics, and operating an instance of a predetermined class in an object-oriented concept;

4   and

5   said current price evaluation operation means contains reference information, contained

71

6   in the instance of the predetermined class, for reference to a predetermined method for computing

7   the financial characteristics.

1   7.   The apparatus according to claim 5, wherein:

2   said financial characteristic computation means comprises:

3   a plurality of single financial characteristic computation means for computing a

4   plurality of single financial characteristics in each current price evaluating operation performed

5   by said current price evaluation operation means;

6   virtual financial characteristic computation means for computing a new virtual

financial characteristic by combining said plurality of single financial characteristics, and

providing said virtual financial characteristic for said current price evaluation operation means.

8.   The apparatus according to claim 5, wherein

said single financial characteristic computation means is a module for modeling each unit

financial characteristic, and operating each instance of a plurality of predetermined classes in the

4   object-oriented concept;

5   said virtual financial characteristic computation means is a module for operating an instance

6   of a predetermined super class inherited by the plurality of predetermined classes; and

7   said current price evaluation operation means contains reference information, stored by the

8   instance of the predetermined super class for reference to a predetermined method for computing

9   the virtual financial characteristics.

72

9.   The apparatus according to claim 5, wherein

said financial characteristics are real time features to be input through a network.

10.   The apparatus according to claim 5, further comprising:

financial characteristic definition means for defining the financial characteristics.

1   11.   A financial transactions modeling apparatus for modeling a transaction sequence settled by

2   settling financial transactions in a predetermined transaction period, comprising:

3   one or more unit transaction modeling means comprising:

unit transaction information storage means, provided at each of a receipt side and

a payment side of the financial transactions for one or more unit transaction period obtained by

dividing the predetermined transaction period for each receipt or payment, for individually storing

7   information about a unit transaction, and

current price evaluation operation means in the unit transaction period; and

transaction sequence modeling means comprising]

10   reference information storage means for holding a reference information group for

11   reference to said unit transaction modeling means corresponding to each of a receipt side and a

12   payment side of the financial transactions, and

13   transaction sequence characteristic computation means for sequentially referring to

14   said unit transaction modeling means from the reference information group in each of the receipt

15   side and the payment side of the financial transactions at a predetermined instruction, performing

16   the current price evaluation operation means and obtaining operation results, and computing a

73

17   characteristic of the transaction sequence based on each of the operation results.

12.   The apparatus according to claim 11, wherein

said predetermined period is only a predetermined point.

13.   The apparatus according to claim 11, wherein

said financial transactions are financial goods other than a currency;

14.   The apparatus according to claim 11, wherein

said unit transaction modeling means is implemented as a list structure.

15.   The apparatus according to claim 11, wherein:

said unit transaction modeling means is a module for holding as a class member a

parameter for use in a current price evaluating operation performed by said unit transaction

information storage means in the unit transaction period, holding the current price evaluation

5   operation means as a method, and operating an instance of a predetermined class in an

6   object-oriented concept; and

7   said transaction sequence modeling means is a module for holding as a list member a

8   reference information group in each of a receipt side and a payment side of the financial

9   transactions, holding the transaction sequence characteristic computation means as a virtual

10   method, and operating an instance of a predetermined container class in the object-oriented

11   concept.

74

12   16.   The apparatus according to claim 11, wherein

13   a current price evaluation operation means of said unit transaction modeling means

14   performs a current price evaluating operation based on a future value index computed based on

15   any of three types of indices of an interest, an earning rate, and a price in the unit transaction

16   period corresponding to said unit transaction modeling means, and an evaluation value independent

17   of any indices of the interest, the earning rage, and the price.

1   17.   The apparatus according to claim 16, wherein

2   a current price evaluation operation means of said unit transaction modeling means

      comprises discount rate multiplication means obtains as a current price evaluating operation result

      a current value by multiplying a current price evaluating operation performed by the current price

      evaluation operation means by a predetermined discount rate.

      18.   The apparatus according to claim 11, further comprising:

           user interface means for computing one or more unit transaction periods by dividing the

3   predetermined transaction period for each receipt or payment based on a setting of date

4   information, generating the unit transaction modeling means for each computed unit transaction

5   period on each of a receipt side and a payment side of the financial transactions, and generating

6   a reference information group in said transaction sequence modeling means corresponding to each

7   of the receipt side and the payment side.

1   19.   The apparatus according to claim 11, further comprising:

2   user interface means for changing a parameter for financial transactions to be modeled for

3   each unit transaction modeling means, and issuing a predetermined instruction in response to the

4   change.

1   20.   The apparatus or a financial transactions modeling apparatus according to claim 11, further

2   comprising:

3   financial characteristic computation means for computing financial characteristics in each

4   current price evaluating operation performed by said current price evaluation operation means, and

     providing each current price evaluation operation means with the financial characteristics.

21.   The apparatus according to claim 20, wherein:

          said financial characteristic computation means is a module for modeling the financial

     characteristics, and operating an instance of a predetermined class in an object-oriented concept;

     and

5   said current price evaluation operation means contains reference information, contained

6   in the instance of the predetermined class, for reference to a predetermined method for computing

7   the financial characteristics.

1   22.   The apparatus according to claim 20, wherein:

2   said financial characteristic computation means comprises:

3   a plurality of single financial characteristic computation means for computing a

4   plurality of single financial characteristics in each current price evaluating operation performed

5   by said current price evaluation operation means;

6   virtual financial characteristic computation means for computing a new virtual

7   financial characteristic by combining said plurality of single financial characteristics, and

8   providing said virtual financial characteristic for said current price evaluation operation means.

1   23.   The apparatus according to claim 20, wherein

2   said single financial characteristic computation means is a module for modeling each unit

3   financial characteristic, and operating each instance of a plurality of predetermined classes in the

object-oriented concept;

said virtual financial characteristic computation means is a module for operating an instance

of a predetermined super class inherited by the plurality of predetermined classes; and

said current price evaluation operation means contains reference information, stored by the

instance of the predetermined super class for reference to a predetermined method for computing

the virtual financial characteristics.

24.   The apparatus according to claim 20, wherein

said financial characteristics are real time features to be input through a network.

25.   The apparatus according to claim 20, further comprising:

financial characteristic definition means for defining the financial characteristics.

1   26.   A financial transactions modeling apparatus for modeling an option transaction relating to

2   finance, comprising:

3   one or more original asset modeling means comprising:

4   storage means for storing information about an original asset of the option

5   transaction, and

6   a current price evaluation operation means; and

7   option modeling means comprising:

8   reference information storage means for holding a reference information group for

9   reference to each of said original asset modeling means, and

10   option transaction characteristic computation means for computing a characteristic

11   of the option transaction based on each operation result from said current price evaluation

12   operation means in each of said original asset modeling means sequentially referred to by the

13   reference information group and/or a predetermined evaluation model.

    27.   The apparatus according to claim 26, wherein

        said original asset modeling means is implemented as a list structure.

1   28.   The apparatus according to claim 26, wherein:

2   said original asset modeling means is a module for holding as a class member a parameter

3   for use in modeling the original asset in said storage means, holding said current price evaluation

4   operation means as a method, and operating an instance of a predetermined class in an

5   object-oriented concept; and

6   said option modeling means is a module for holding the reference information group as a

7   list member, holding said option transaction characteristic computation means as a virtual method,

8   and operating an instance of a predetermined container class in the object-oriented concept.

1   29.   The apparatus according to claim 26, wherein

2   when a date set for the option transaction is in an in-the-money state of the option

3   transaction at an issue of a predetermined instruction, said option modeling means sequentially

4   refers to said original asset modeling means in the reference information group, obtains operation

5   results through said current price evaluation operation means, and computes a characteristic of the

6   option transaction based on each of the operation results and the predetermined evaluation model;

7   and

8   when the date is in an out-of-the-money state of the option transaction, said option

9   modeling means computes a characteristic of the option transaction based only on the

10   predetermined evaluation model.

1   30.   The apparatus or a financial transactions modeling apparatus according to claim 26, further

2   comprising:

3   financial characteristic computation means for computing financial characteristics in each

4   current price evaluating operation performed by said current price evaluation operation means, and

5   providing each current price evaluation operation means with the financial characteristics.

79

1   31.   The apparatus according to claim 30, wherein:

2   said financial characteristic computation means is a module for modeling the financial

3   characteristics, and operating an instance of a predetermined class in an object-oriented concept;

4   and

5   said current price evaluation operation means contains reference information, contained

6   in the instance of the predetermined class, for reference to a predetermined method for computing

7   the financial characteristics.

1   32.   The apparatus according to claim 30, wherein:

said financial characteristic computation means comprises:

a plurality of single financial characteristic computation means for computing a

plurality of single financial characteristics in each current price evaluating operation performed

5   by said current price evaluation operation means;

virtual financial characteristic computation means for computing a new virtual

financial characteristic by combining said plurality of single financial characteristics, and

8   providing said virtual financial characteristic for said current price evaluation operation means.

1   33.   The apparatus according to claim 30, wherein

2   said single financial characteristic computation means is a module for modeling each unit

3   financial characteristic, and operating each instance of a plurality of predetermined classes in the

4   object-oriented concept;

5   said virtual financial characteristic computation means is a module for operating an instance

80

6 of a predetermined super class inherited by the plurality of predetermined classes; and

7 said current price evaluation operation means contains reference information, stored by the

8 instance of the predetermined super class for reference to a predetermined method for computing

9 the virtual financial characteristics.

34. The apparatus according to claim 30, wherein

said financial characteristics are real time features to be input through a network.

35. The apparatus according to claim 30, further comprising:

financial characteristic definition means for defining the financial characteristics.

36. A computer-readable storage medium for storing a program used and read by a computer

for performing:

one or more transaction entity modeling function for individually modeling respective

transaction entities, and performing respective current price evaluating operations; and

virtual transaction realizing function for holding a reference information group for

6 reference to each of said transaction entity modeling functions, sequentially referring to each of

7 said transaction entity modeling functions in the reference information group, obtaining operation

8 results from the current price evaluating operation, and computing a characteristic of compound

9 transactions containing transaction entities corresponding to each of said transaction entity

10 modeling functions based on each of the operation results.

1   37.   A computer-readable storage medium for storing a program used and read by a computer

2   for performing:

3   one or more unit transaction modeling function, implemented for one or more unit

4   transaction period obtained by dividing a predetermined transaction period for each receipt or

5   payment on each of a receipt side and a payment side of financial transactions settled by settling

6   the financial transactions in the predetermined transaction period, for performing a current price

7   evaluating operation in the unit transaction period; and

8   transaction sequence modeling function for holding a reference information group for

9   reference to said unit transaction modeling function corresponding to each of a receipt side and

10   a payment side of the financial transactions, sequentially referring to said unit transaction modeling

11   function in the reference information group in each of the receipt side and the payment side of the

12   financial transactions at a predetermined instruction, performing the current price evaluation

13   operation, obtaining operation results, and computing a characteristic of the financial transactions

14   based on each of the operation results.

1   38.   A computer-readable storage medium for storing a program used and read by a computer

2   for performing:

3   one or more original asset modeling function for individually modeling an original asset

4   of an option transaction, and having a current price evaluation operation function; and

5   an option modeling function for holding a reference information group for reference to

6   each of said original asset modeling function, and computing a characteristic of the option

7   transaction based on each operation result from said current price evaluation operation function

82

8   in each of said original asset modeling function sequentially referred to by the reference

9   information group and/or a predetermined evaluation model.